International Journal of Asian Social Science
ISSN(e): 2224-4441
ISSN(p): 2226-5139
DOI: 10.55493/5007.v15i8.5533
Vol. 15, No. 8, 213-232.

URL: www.aessweb.com

Unravelling the factors influencing street currency exchange and its repercussions on monetary policy in the DRC: A cross-study of contextual aspects and statistical inference

Taylor Mabula Pongo[1,2]
Claudine Tshimanga Mbuyi[2+]

[1]*Economics and Rural Development Unit. Axe: Modeling and Development, Gembloux Agro-Bio Tech, University of Liège, Belgium.*
[1,2]*Email: taylormabula@gmail.com*
[2]*Faculty of Economics and Development, Catholic University of Congo, Democratic Republic of Congo.*
[2]*Email: priva_tshimanga@yahoo.fr*


(+ Corresponding author)

Article History
Received: 30 April 2025
Revised: 29 July 2025
Accepted: 6 August 2025
Published: 15 August 2025

Keywords
Democratic Republic of Congo
Foreign exchange market
Foreign exchange
Kinshasa
Monetary policy
Statistical inference.

ABSTRACT

Currency exchange is experiencing a rapid surge in the Democratic Republic of Congo, where the foreign exchange market is dominated by street money changers. Data collected from 156 money changers in the city of Kinshasa and from the Central Bank of Congo (BCC) helped identify, through the chi-square test, the logit model, and the VAR model, the factors influencing the exchange rate and its repercussions on monetary policy. The results of the chi-square test indicate that currency exchange is more commonly practiced by men, generally under the age of 45. The same results suggest that 69% of respondents are educated. In addition, street money changing is the main activity for 81% of them, and 72% have been practicing it for more than ten years. The results of the logit model suggest that the exchange rate is influenced by unemployment, profitability, and the setting of the exchange rate. Furthermore, the results of the VAR model on the impact of street currency exchange on national monetary policy indicate that the parallel exchange rate, the amount of money outside the banking system, and past inflation variables explain 67% of the inflation rate, or 0.678057. In particular, the parallel exchange rate is the most significant variable in the model, with a t-test value greater than 2, i.e., 2.85281, followed by non-bank currency circulation, which explains it at 0.2886.

Contribution/ Originality: This is the first major study in the Democratic Republic of the Congo (DRC) that, since the liberalization of the foreign exchange market, employs econometric models such as chi-square, logit, and VAR to demonstrate how the informal market influences monetary policy dynamics. The study particularly focuses on the impact of the parallel exchange rate and non-bank currency circulation on economic stability and policy effectiveness.

1. INTRODUCTION

The year 1971, marking the transition to a globalized and liberalized economy, was fundamentally characterized by the collapse of the Bretton Woods international monetary system, which established fixed exchange rates and the convertibility of currencies into gold. This collapse was triggered by the financial crisis and rising inflation in the United States. To mitigate their risks, banks developed new trading instruments such as swaps and futures (Eichengreen, 2011). With the adoption of the floating exchange rate regime, implemented in March 1973, the foreign exchange profession gained full significance and became closely linked with the economic

sphere. Currency exchange rates are now determined by supply and demand, information circulates more rapidly, and market volatility has increased.

Cambisme is the business of currencies in the forex (foreign exchange market). A money changer is an economic operator whose transactions involve trading with the objective of generating a profit from the exchange rate difference that is, between the buying and selling rates of foreign currencies (Mabantula, 2010). To better understand the dynamics of the foreign exchange market, it is crucial to highlight the functioning of forex trading and its intervention in the market. Cambisme consists of economic operators (Mabantula, 2010) conduct currency trading in foreign exchange bureaux (currency exchange offices). In this context, money changers engage in currency exchange operations involving both the national currency and foreign currencies, operating under the authorization of the central bank. As regulated actors within the foreign exchange market, they contribute to the stabilization and formalization of currency transactions by participating in the official oversight of currency flows. These operators practice arbitrage by monitoring financial markets to identify sources where foreign currencies are less costly. They purchase currencies at lower rates and resell them at higher rates, thereby generating profit from exchange rate differentials. Furthermore, they facilitate the adjustment of exchange rates by acquiring foreign currencies where they are abundant and inexpensive, and distributing them where they are scarce and valued more highly. As such, the money changer plays a strategic role in contributing to the equilibrium of the exchange rate within the broader monetary system (Mabantula, 2010).

In fact, it is important to specify the extroverted nature of the economy of the Democratic Republic of Congo, which is largely dependent on international trade, mainly imports, requiring large foreign exchange reserves in order to meet the demand for foreign currency, which remains a scarce resource (Muzaliwa, 2022). As a result, the Central Bank of Congo (BCC) has the obligation to ensure effective management of currencies in accordance with monetary policy and exchange regulations. However, for more than a decade, this Central Bank has been consistently unable to satisfy the demand for currency in the market (Kalumuna, 2004). To remedy this situation, the parallel foreign exchange market is developing in the DRC.

Regarding the historical process of foreign exchange in the Democratic Republic of the Congo, Marie Brigitte MABANTULA states that the evolution of this parallel foreign exchange market has gone through several phases. (Mabantula, 2010): Until the 1980s, the profession of money changer was relatively marginal, as foreign exchange operations were mainly carried out within commercial banks. This was the phase of merchant money changers. During this period, exchange was strictly regulated, and parallel market activities were prohibited and therefore illegal. The second phase began in the early 1990s with the emergence of Wall Street, a stage marked by the relocation of the money-changing center from Ngobila Beach to downtown, on Aviateurs Avenue, in the Wall Street neighborhood; this period was characterized by the formation of networks among money changers. The third phase (1992–1995) was marked by market fragmentation and division of labor. The fourth phase (from 1995 onward) entered a stage of money changing associated with violence and mafia activities. Today, money changing presents a completely different configuration compared to two decades ago, in every respect: legal status, location, social status of money changers, nature of the activity, etc. Once heavily repressed, the activity now enjoys considerable tolerance. This evolution led to the implementation of specific regulations to frame and structure the entire foreign exchange market in the Democratic Republic of Congo (DRC).

With regard to this regulation, the OHADA Uniform Act of 15 December 2010 highlighting General Commercial Law, in Article 3, defines commercial acts by nature, which includes foreign exchange transactions. For several decades, foreign exchange in the DRC was specifically defined by Ordinance-Law No. 67-272 of 23 June 1967, which clarified the regulatory powers of the Central Bank of Congo. According to this ordinance, apart from intermediaries approved and authorized by the Central Bank, no one was allowed to trade in currency and means of payment in foreign currency throughout the DRC. Currently, foreign exchange is governed by the regulations of 25 March 2014, as amended to date by Regulation No. 001/19 of 29 January 2019 (Galag, 2024). In Chapter 8, Article

97, this law categorizes foreign exchange intermediaries into two groups: authorized banking and non-banking intermediaries (which are financial institutions whose financial activities differ from traditional banking operations); these include savings and credit cooperatives, microfinance structures, exchange offices, etc., as well as electronic money institutions.

Despite these regulations, the exchange of Congolese francs for foreign currency is carried out freely in the streets, outside the banking circuit, by unlicensed operators commonly known as "street exchangers" (Mulumba, 2001). This phenomenon has grown significantly over the years, with a large number of operators and a high volume of currency circulating outside the banking system. This has led to considerable impacts on monetary policy and the country's overall economy, including exchange rate volatility, more complicated management of foreign currency reserves, and disruptions in the implementation of economic stabilization measures.

In light of the above, this study aims to unravel the factors likely to influence street currency exchange in Kinshasa and its repercussions on monetary policy. By analyzing the socio-demographic aspects, the factors related to their activities as well as the time series data available at the BCC, we expect to obtain an in-depth understanding of the mechanism in place. Furthermore, based on data analyses from the city of Kinshasa, it will be crucial for us to propose relevant recommendations aligned with the reality of street money changers in the DRC through statistical inferences.

In addition to the introduction and conclusion, this study is subdivided into three main parts: (i) overview of the theoretical and empirical literature review, (ii) methodology of the analysis of the factors influencing street currency exchange and its repercussions on monetary regulation, as well as (iii) statistical analysis and interpretation of the results.

2. OVERVIEW OF THE THEORETICAL AND EMPIRICAL LITERATURE REVIEW

2.1. The Money-Changing Business

Money changing involves the dynamic operations of currency exchange. Money changers, also known as currency dealers, play a fundamental role in managing exchange rate risk (FasterCapital, 2024). To this end, they study market trends, monitor exchange rates, and execute transactions on behalf of their clients.

Moreover, by highlighting the theoretical dynamics of currency exchange, we can better understand the factors influencing monetary regulation, as well as the speculative mechanisms implemented by these currency traders. Thus, currency traders are divided into three main categories (Karlin, 1984):

- The spot trader**,** who primarily handles the buying and selling of foreign currencies using tools such as phones and screen keyboards to manage transactions and access market information.
- The deposit trader**,** who focuses on managing interbank deposits or deposits from non-bank clients, distinguishes between short-term transactions (up to one year) and very short-term transactions (ranging from days to weeks).
- The client trader**,** who acts as an intermediary between market makers and corporate treasurers or non-bank financial institutions, facilitates their access to market services.

This research specifically analyzes the spot forex trader, which includes street forex traders in the city of Kinshasa. In highlighting the dynamics of street currency exchange, it is also necessary to take into account the different theories of monetary policy, which not only influence these informal foreign exchange transactions but are also impacted by them.

2.2. Monetary Policy

Like any economic policy, monetary policy aims to maximize social welfare (Drumetz, Pfister, & Sahuc, 2015). Among economists and central bankers, as well as within the general public, there is a consensus around the idea that inflation has a cost and that price stability is the overarching objective of monetary policy (Drumetz et al.,

2015). In addition, they aim to promote balanced economic growth, price stability, full employment, and balanced foreign trade.

Overall, the objectives of monetary policy are divided into three categories: the **final objectives** (economic growth and full employment), which the Central Bank does not necessarily regulate; monitoring of intermediate objectives, which are controllable and serve as indicators for verifying the evolution of the final objectives; and operational objectives, which are specific vectors of the state of monetary policy, through monetary aggregates or indicators of future inflation.

Indeed, the theories of monetary policy differ regarding the impact of monetary management on output and inflation. As a result, classical theory, of which Fisher was the precursor, reconciled prices with the money supply (Ponsard, 1959), whereas Keynesians understood money as a dynamic influencing demand (Graziani, 1991). As for the monetarists (Friedman and Hayek), the money supply explains nominal GDP in the short run and the price level in the long run (Jahan & Papageorgiou, 2014).

In order to put these theories into concrete action, central banks highlight various monetary policy instruments, which are divided into two main categories (Drumetz et al., 2015): direct and indirect. Direct instruments, such as credit control and credit selectivity, help regulate the granting of loans and channel financing towards specific sectors. Indirect instruments, including the rediscount rate and reserve requirements, adjust banks' liquidity and refinancing conditions. Regarding open market operations, they regulate bank liquidity through the purchase or sale of securities. These instruments influence the transmission channels of monetary policy, which explain how changes in interest rates, credit availability, asset prices, and the exchange rate affect the overall economy (Mishkin, 1996).

Based on several empirical studies that have developed econometric models combining variables from different approaches to explain the factors interacting with monetary policy, this research cross-analyzes sociodemographic variables, street currency trader activities, and time series data to explain the street currency exchange model and its impact on monetary policy in the DRC. The sociodemographic variables considered in this analysis include gender, marital status, age, level of education, and experience. Next, the variables related to currency trading activities focus on addressing social or family-related issues, unemployment, profitability, registration with the central bank, exchange rate setting, possession of authorization from the BCC, and compliance with regulatory conditions set by monetary authorities. Quantitative variables from the formal and informal foreign exchange markets, captured by the central bank, include currency in circulation outside the banking system, the parallel exchange rate, and the inflation rate. These variables are considered as research hypotheses.

2.3. Table of Assumptions

As shown in Table 1, the variables used in this analysis are considered to be research hypotheses. These hypotheses are expressed in terms of expected signs of influence and are formulated based on the findings of similar studies [see the references in Table 1: 1, 3, 9, 11, 12, 19], carried out in other contexts. The language of these expected signs can be explained as follows:

- Negative (-) indicates that 1 does not influence street currency trader and its impact on monetary policy, relative to 0.
- Positive (+) indicates that 1 influences street currency and its repercussions on monetary policy, compared to 0.
- Variables that do not have signs have not been referenced in previous studies; in this case, we will assume them to be positive, i.e., 1 influences street currency exchange and its repercussions on monetary policy, compared to 0.

Table 1. Analysis of assumptions.

Categories	Predictors	Description and explanation of the equation	Expected signs	References
Socio-demographic variables			Influence on street currency trading and its repercussions on monetary policy	
	Gender	1= Female; 0 = Male	+	Tshimanga (1996)
	Age	1 = Old > 45 years old; 0 = Youth: ≤ 45 years old	+	De Herdt and Marysse (2002)
	Instruction	1 = Educated; 0= uneducated	+	Mabantula (2010)
	Marital status	1= married; 0= Unmarried	+	De Herdt and Marysse (2002)
	Principal activity	1= Cambism; 0= Other	+	Karlin (1984)
	Experiment	1 = Long ≥ 10 years; 0 = Short ≤ 10 years	+	-
Variables of foreign exchange traders' activities	Solving social and family problems	1= Yes; 0= No	+	Tshimanga (1996)
	Unemployment	1=Yes; 0= No	+	Tshimanga (1996)
	Profitability of the activity	1=Yes; 0= No	+	Karlin (1984)
	Central bank authorization	1=Yes; 0=No	-	Muzaliwa (2022)
	Fixing the exchange rate	1 = Set by the authorities; 0 = Fixed by the market	+	Tshimanga (1996)
	Holding the BCC authorization	1=Yes; 0=No	+	-
	Monetary authorities meet the conditions for supervision.	1=Yes; 0=No	+	-
	Collaboration with banks	1=Yes; 0=No	+	Tshimanga (1996)
Quantitative variables (time series)	CFHB (cash circulation outside the banking circuit)	Amount of fiat money in circulation outside the banking circuit	+	Friedman (1970)
	TCHP (Parallel Exchange Rate)	Variation in the parallel exchange rate observed over a given period	+	(Eichengreen, 2011) World Bank
	TINF (Inflation Rate)	Rate of change in consumer prices, measured annually.	+	-

According to this table, the predictors gender, marital status, age, level of education, experience, resolution of social and family problems, unemployment, profitability of the activity, fixing of the exchange rate, cash circulation outside the banking circuit, parallel exchange rate, as well as the inflation rate, have positive expected signs, i.e., they are likely to positively influence street currency exchange and its repercussions on monetary policy. On the other hand, the acquisition of the central bank's authorization has an expected negative sign, which means that it

has a negative impact on street currency exchange. These hypotheses will be confirmed or refuted following the empirical analysis of this study.

2.4. Presentation of the Study Area: Location and Geographical Situation of the City of Kinshasa[1]

Kinshasa, the capital of the DRC, covers 9,965 km². To the east, the city of Kinshasa is separated by the province of Bandundu, to the west by the Congo River, and to the south by Bas-Congo. In addition, this city is characterized by a tropical climate with temperatures varying between 21°C and 30°C, varying between a dry and a wet season. Economically, the city of Kinshasa is a major industrial center with 506 companies in various sectors, such as metallurgy, textiles, petroleum, and agribusiness, thus contributing to economic growth.

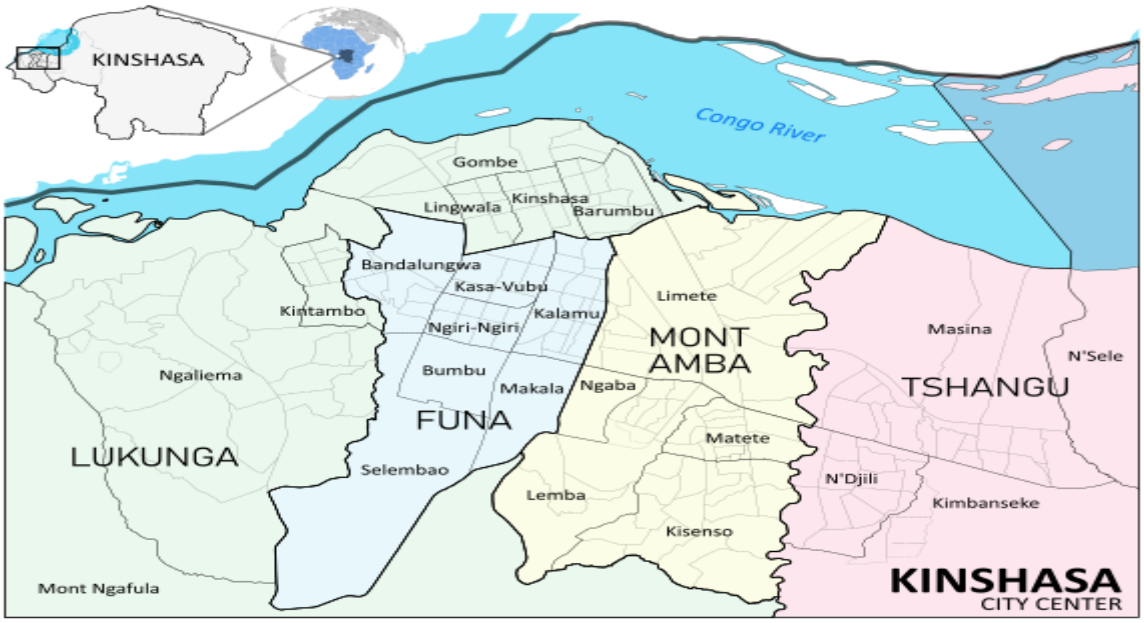

Figure 1. Cartography of the city of Kinshasa.
Note: https://www.researchgate.net/publication/371267012/figure/fig1/AS:11431281164614776@1685809999530/Carte-des-communes-de-Kinshasa-en-republique-du-Congo-La-24e-commune-Maluku-etant-la.png.

Figure 1 shows the city of Kinshasa with its 24 communes. The survey sites were selected from these communes, namely: Sozacom (Gombe commune), Bitabe (Masina commune), Rond-Point Ngaba (Ngaba commune), Victoire (Kasa-Vubu commune), Magasin (Kintambo commune), and UPN (Ngaliema commune). See the distribution in Table 2.

3. METHODOLOGY FOR ANALYZING THE FACTORS INFLUENCING STREET CURRENCY TRADING AND ITS IMPACT ON MONETARY REGULATION

3.1. Selection of Survey Sites and Data Collection

The selection of sites and individuals to be surveyed was based on several criteria: Regarding the sites, they were selected based on having currency trading as their main activity, being easily accessible for surveys, and hosting a diverse range of street currency traders. As for the individuals, they had to voluntarily agree to participate in the survey, have currency trading as their primary occupation, and possess proven experience in the

[1] Ministry of Urban Planning and Housing (DRC), Regional profile study of the urban sector summary report, Kinshasa, consulted in https://unhabitat.org/sites/default/files/download-manager-files/RAPPORT%20%20VILLE%20%20DE%20KINSHASA.pdf, read and consulted on August 02, 2024 at 11 p.m.

practice of currency trading, among other criteria. Moreover, given the high concentration of street currency traders in specific areas of Kinshasa, it was crucial for us to opt for purposive cluster sampling. This type of sampling is generally used when the studied population is structured into clusters (such as neighborhoods or specific zones), especially when the selection of individuals depends on certain criteria. Before forming this sample, an exploratory survey was conducted through focus groups and interviews with currency traders to verify the selection criteria, understand the variability related to the practice of currency trading, and examine their operational and organizational modes. Following this study, a series of structured questionnaires was distributed to 156 currency traders, with whom in-depth surveys were carried out.

Table 2. Distribution of respondents by selected sites.

Sites	Total cluster size	Number of respondents per cluster	Percentage
Sozacom	97	29	19 %
Bitabe	90	27	17 %
Rond-Point Ngaba	87	26	17 %
Rond-Point Victoire	85	26	17%
Magasin	83	25	16%
UPN	78	23	15%
Total	520	156	100

This table shows the distribution of respondents across the selected sites. The total number of individuals surveyed was determined based on predefined selection criteria. The data collected on the number of street money changers in each stratum made it possible to form a representative sample equivalent to 30% of the target population.

3.2. Processing, Data Analysis, and Justification of Models

The data collected in our survey were analyzed in three sequential phases, using SPSS and EVIEWS software: chi-square testing, logistic regression, and the canonical VAR model. The chi-square test (or χ^2 test) was used to determine whether the differences observed in the sample, based on socio-demographic characteristics (see Table 1, category 1 of variables), are statistically significant compared to the expected frequencies. To do this, two types of hypothesis verification were chosen: (i) the null hypothesis: H0: The two variables are independent (no relationship), (ii) the alternative hypothesis: H1: The two variables are related (presence of a relationship). Regarding decision-making, if the probability associated with the Pearson chi-square value is less than 5% or 10%, the null hypothesis is rejected in favor of the alternative hypothesis. Data on the activities of foreign exchange dealers (see the second category of variables in Table 1) were analyzed based on logistic regression, using the logit model. This approach aims to identify the factors influencing street currency exchange in Kinshasa. Statistically, the logit model is expressed as follows:

$$Y = f(x, e) \qquad (1)$$

Where Y is the dependent (or to be explained) variable, i.e., "practices forex trading"; X constitutes the dynamics of the matrix of variables likely to explain the variation of Y; and e is the logistic error of distribution, which accounts for all other variables not taken into consideration. In addition, the Logit model estimate is based on the maximum likelihood method, which highlights the inference of the probability distribution parameters of the sample. Pi is the probability associated with the survey unit.

$$\text{Pi} = \text{f (Ii)} = \frac{1}{1+e-II} \qquad (2)$$

$$I = \beta 0 + \beta 1Xi1 + \beta 2Xi2 + \beta 3Xi3 + \beta 4Xi4 + \ldots + \beta nXin \qquad (3)$$

Ii denotes the particularities of the survey unit and its decision of choice; the β_i is the coefficient of the explanatory variables; and the X_{in} are variables independent of the model. According to the sources, the appropriate statistical significance level for this model is: $\alpha < 0.05$. To understand how foreign exchange practices affect key economic variables, it is essential to use the VAR model, which also allows us to assess the impact of these practices on the DRC's monetary policy. This modeling will be based on three quantitative variables derived from central bank data: cash circulation outside the banking circuit (CFHB), the parallel exchange rate (TCHP), and the inflation rate (TINF) (see Table 1, third category of variables). These three variables are crucial because they reflect the dynamics of informal liquidity, fluctuations in the parallel foreign exchange market, and the overall price level. Using the VAR model, inferential reasoning will be employed to draw conclusions about the overall impact of forex on monetary policy. The general form of the VAR model is as follows:

$BYt = A0 + \sum AiYt - i + \varepsilon t$, where εt represents the vector of errors, allowing structural shocks to be analyzed; Y is the endogenous variable composed of the series of the variable. However, for this study, we will have three models with three endogenous variables (TXINF, TXCHPARA, CFDHB), and the optimal model will be decided after estimation by applying the Schwarz criterion.

4. ANALYSIS AND INTERPRETATION OF STATISTICAL RESULTS

4.1. Characteristics of the Respondents in Relation to the Practice of Street Currency Exchange

The results below provide an overview of the sample and the characteristics of the respondents concerning the practice of street currency exchange in the city of Kinshasa. Given the survey design and the purposive selection of respondents, it is reasonable to assume that the distribution of respondents' characteristics is representative of the entire population. The various results presented in Table 3 were obtained based on the independence test, which was used to determine the existence of relationships between the practice of street currency exchange and the respondents' characteristics.

Table 3. Characteristics of the respondents in relation to the practice of street currency exchange.

Characteristics	Practice of street currency exchange			X2-test (PEARSON)	P-value
Age	Yes	No	Total	1.578	0.209
Over 45 years old	41(31.500)	5(19.200)	46(29.500)		
Under 45 years old (Youth)	89 (68.500)	21(80.800)	110 (70.500)		
Total	130 (100)	26 (100)	47 (100)		
Instruction	Yes	No	Total	0.149	0.700
Educated	90 (69.200)	17 (65.400)	107(68.600)		
Uneducated	40(30.800)	9(34.600)	49(31.400)		
Total	130(83.300)	26(16.700)	156(100)		
Civilian	Yes	No	Total	7.125	0.008**
Married	37(28.500)	1(3.800)	38(24.400)		
Unmarried	93(83.300)	25(96.200)	118(75.600)		
Total	130(68.100)	26(16.700)	156(100)		
Strong point	Yes	No	Total	29.714	0.000
Currency exchange	115(88.500)	11(42.300)	126(80.800)		
Other	15(57.700)	15(11.500)	30(19.200)		
Total	130(83.300)	26(16.700)	156(100)		
Experiment	Yes	No	Total	11.873	0.001**
More than 10 years (long)	87(66.900)	26 (100)	113(72.400)		
Under 10 years old (Short)	43(33.100)	0(0.000)	43(27.600)		
Total	130(83.300)	26(16.700)	156(100)		
Sex	Yes	No	Total	1.729	0.188
Man	105 (80.800)	18(69.200)	123(78.800)		
Wife	25(19.200)	8(30.800)	33(21.200)		
Total	130(83.300)	26(16.700)	156(100)		

Note: Number of survey observations = 156; percentage in parentheses, value of $p(^{X2})$ = Chi-square fit test (One variable), ** indicates a 1% highly significant test.

In line with the hypothesis put forward in Table 1, the results indicate that three sociodemographic predictors in the equation have statistically significant relationships with street currency exchange: experience, occupation, and marital status. Other predictors, such as gender, education level, and age, are not significant in relation to the practice of street currency exchange, although significant and positive relationships were expected.

It should be noted, however, that street currency exchange is more commonly practiced by young people under 45 years old, likely due to the lack of employment opportunities in the formal sector. According to information from focus groups, although the main cause is linked to the limitations of the job market, street currency exchange offers attractive economic opportunities, such as profit margins that in most cases seem more appealing than those offered by certain formal jobs. It is also noted that most street exchangers are educated and unmarried. Often informal and flexible, street currency exchange appears to be highly sought after by people without family responsibilities. Moreover, as street currency exchange is the primary activity for 81% of the respondents, it is observed that 72% have been practicing it for more than ten years. Although the selection prioritized women, the results suggest that street currency exchange is mainly practiced by men. This aspect is explained by the fact that this activity requires significant physical commitment and a strong capacity for resilience in the face of associated risks such as robbery and harassment by law enforcement officers.

4.2. Modeling the Predictive Factors of Street Currency Exchange

The sign of the coefficients and the odds ratios denoted by Exp(B) indicate the direction of the relationship between the variables in the equation. Wald's statistic serves the same purpose as the t-test and assesses the contribution of each predictor to the improvement of the model.

The results in Table 4 highlight the positive influence of four socio-economic factors on street currency exchange: unemployment, exchange rate fixing, profitability, and the satisfaction of the conditions of supervision by the monetary authority, while the authorization of the BCC and the resolution of family and social problems are negatively correlated. In addition, unemployment, profitability, as well as the fixing of the exchange rate, are statistically significant in the practice of street currency exchange.

Table 4. Estimation of the logit model for the practice of street exchange.

Variables in the equation								
Categories of economic factors	**Coef. A**	**S.E.**	**Wald**	**df**	**Sig.**	**Exp(B)**	**95% CI for Exp(B)**	
							Lower	**Upper**
Problem_Solving	-2.414	16674.134	0.000	1	1.000	0.089	0.000	.
Unemployment	1.210	0.602	4.037	1	0.045*	3.353	1.030	10.917
Profitability	1.869	0.616	9.215	1	0.002**	6.479	1.939	21.652
Fix_Tx_Ch	1.659	0.630	6.930	1	0.008	5.252	1.528	18.057
Auto_BCC	-19.745	13320.452	0.000	1	0.999	0.000	0.000	.
Satisf_cond_encad_A_M	0.132	16674.134	0.000	1	1.000	1.141	0.000	.
Constant	19.709	28466.286	0.000	1	0.999	362600012.996		

Note: Number of observations = 156; −2 log-likelihood = 110.404a; R^2 (Nagelkerke) = 0.296; p-value = 0.000; * Indicates a significant test at the 5% level; ** indicates a highly significant test at the 5% level; Indicates a very highly significant test at the 5% level; CI = confidence interval

In connection with the hypotheses identified in Table 1, the results of the analysis suggest that all the predictors identified in the equation relating to the practice of activity have the same expected signs of influence, except for the resolution of family and social problems, which has an opposite sign, whereas positive correlations were expected.

4.3. Model Estimation of the Pass-Through of Street Currency Exchange on Monetary Policy

After analyzing the factors influencing street currency exchange in Kinshasa using the logit model, let us analyze how these factors are likely to influence monetary policy on a macro scale using the VAR model. Since this analysis generalizes the results, the statistical inferences attached to it can be explained as follows: the VAR model predicts the future values of the variables and highlights cause-and-effect relationships; the logit model indicates the likelihood that an event occurs with respect to endogenous variables, while the chi-square test tests hypotheses based on sample data.

Indeed, although the initial analysis was based on the city province of Kinshasa, the quantitative data available at the BCC (Table 1) cover the entire Democratic Republic of Congo. As a result, the use of the canonical VAR (Vector AutoRegressive) model allows us to demonstrate statistical inference, which consists of making predictions or drawing general conclusions in a comprehensive manner.

4.3.1. Analysis of the Stationarity of Variables

The stationarity of a series consists of its properties, such as mean and variance, not being influenced by time: at points t and t+k, the behavior of the series will remain unchanged. Below is the information on stationarity.

Table 5 presents the results of the stationarity test for the inflation rate. The Augmented Dickey-Fuller (ADF) test applied to the TXINF series yields a test statistic of -3.653 (p = 0.0088), which is lower than the critical values at the 1%, 5%, and 10% significance levels. Consequently, the null hypothesis of a unit root is rejected, indicating that the inflation rate is stationary at the level. Therefore, it can be directly included in the VAR model without requiring prior transformation.

Table 5. Inflation rate: TXINF.

Null hypothesis: TXINF has a unit root				
			t-Statistic	**Prob.***
Augmented Dickey-Fuller test statistic			-3.653	0.008
Test critical values:	1% level		-3.605	
	5% level		-2.936	
	10% level		-2.606	
*MacKinnon (1996) one-sided p-values.				
Dependent variable: D(TXINF)				
Variable	**Coefficient**	**Std. error**	**t-Statistic**	**Prob.**
TXINF(-1)	-0.519	0.142	-3.653	0.000
C	318.910	267.320	1.192	0.240
R-squared	0.259	Mean dependent var		-0.564
Adjusted R-squared	0.240	S.D. dependent var		1833.191
S.E. of regression	1597.659	Akaike info criterion		17.639
Sum squared resid	96995552	Schwarz criterion		17.723
Log likelihood	-350.783	Hannan-Quinn criterion		17.669
F-statistic	13.346	Durbin-Watson stat		2.118
Prob(F-statistic)	0.000			

Note: *Indicates that the p-values were calculated using the one-sided approach of MacKinnon (1996), which is used to assess the significance of the ADF test statistic.

Table 6 presents the results of the stationarity test for the parallel exchange rate (TXPARA). The Augmented Dickey-Fuller (ADF) test statistic is -5.030 (p = 0.0002), which is lower than the critical values at the 1%, 5%, and 10% significance levels.

Therefore, we reject the null hypothesis of a unit root, indicating that the parallel exchange rate series is stationary at the level and can be directly included in the VAR model without any transformation.

Table 6. Parallel exchange rate.

Null hypothesis: TXPARA has a unit root			
		t-Statistic	**Prob.***
Augmented Dickey-Fuller test statistic		-5.030	0.000
Test critical values:	1% level	-3.605	
	5% level	-2.936	
	10% level	-2.606	
*MacKinnon (1996) one-sided p-values.			
Dependent variable : D(TXPARA)			

Note: Indicates that the p-values were calculated using the one-sided MacKinnon (1996) approach, which is used to assess the significance of the ADF test statistic.*

Table 7 shows that the lagged parallel exchange rate (TXPARA (-1)) has a significant negative effect (-0.799, p = 0.000) on cash circulation outside the banking system. The model explains 39.97% of the variance (R^2 = 0.3997) and is overall significant (F-statistic p = 0.000012).

Table 7. Cash circulation outside the banking system.

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
TXPARA (-1)	-0.799	0.158921	-5.030	0.000
C	79335.300	80509.85	0.985	0.330
R-squared	0.399	Mean dependent variable		49.840
Adjusted R-squared	0.383	S.D. dependent variable		636170.700
S.E. of regression	499335.700	Akaike Information Criterion		29.128
Sum squared residuals	9.470	Schwarz criterion		29.213
Log likelihood	-580.573	Hannan-Quinn criterion		29.159
F-statistic	25.303	Durbin-Watson stat		1.970
Prob(F-statistic)	0.000			

The stationarity results indicate that all variables are stationary at the level, since the probabilities associated with the study test are less than 0.05. Table 8 presents the results of the stationarity test for cash circulation within the banking circuit (CFHBC). The Augmented Dickey-Fuller (ADF) test statistic is -5.767 (p = 0.0000), which is lower than the critical values at the 1%, 5%, and 10% levels, leading to the rejection of the null hypothesis of a unit root. This indicates that the CFHBC series is stationary at the level. The regression results show that the lagged variable CFHBC(-1) has a negative and significant coefficient (-0.947, p = 0.0000). The model explains 47.34% of the variance (R^2 = 0.4734) and is overall highly significant (F-statistic p = 0.000001). The constant term is not significant.

Table 8. The banking circuit.

Null hypothesis: CFHBC has a unit root.				
			t-Statistic	**Prob.***
Augmented Dickey-Fuller test statistic			-5.767	0.000
Test critical values:	1% level		-3.610	
	5% level		-2.938	
	10% level		-2.607	
*MacKinnon (1996) one-sided p-values.				
Dependent variable: D(CFHBC)				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
CFHBC(-1)	-0.946	0.164	-5.767	0.000
C	8.530	5.630	1.513	0.138
R-squared	0.473	Mean dependent variable		45420.540
Adjusted R-squared	0.459	S.D. dependent variable		4.620
S.E. of regression	3.400	Akaike info criterion		46.778
Sum squared residuals	4.260	Schwarz criterion		46.864
Log likelihood	-910.189	Hannan-Quinn criterion.		46.809
F-statistic	33.263	Durbin-Watson stat		1.994
Prob(F-statistic)	0.000			

Source: *The* * indicates that the p-values were calculated using MacKinnon (1996) one-sided approach for assessing the significance of the ADF test statistic.

4.3.2. Determination of the optimal offset

The Table 9 presents the results of various criteria used to determine the optimal number of lags for the VAR model, based on three endogenous variables (inflation rate, cash circulation within the banking system, and the parallel exchange rate), with a constant as an exogenous variable. The selection criteria applied include the Likelihood Ratio (LR) test, Final Prediction Error (FPE), Akaike Information Criterion (AIC), Schwarz Criterion (SC), and Hannan-Quinn Criterion (HQ). Most of these criteria (FPE, AIC, SC, and HQ) suggest that a VAR model with four lags is optimal, as this choice minimizes prediction error and information loss. Therefore, the VAR model will be estimated using four lags.

Table 9. Determination of the optimal lag length for the VAR model.

Variable endogenous: TXINF CFHBC TXPARA						
Variable exogenous: C						
Lag	**LogL**	**LR**	**FPE**	**AIC**	**SC**	**HQ**
0	-1676.845	NA	6.810	93.324	93.456	93.370
1	-1641.305	63.183	1.560	91.850	92.378	92.034
2	-1622.833	29.760	9.350	91.324	92.247	91.646
3	-1572.027	73.386	9.440	89.001	90.321	89.462
4	-1535.550	46.610*	2.170*	87.474*	89.190*	88.073*

Note: * Indicates lag order selected by the criterion.
LR: sequential modified LR test statistic (each test at 5% level).
FPE: Final prediction error.
AIC: Akaike information criterion.
SC: Schwarz information criterion.
HQ: Hannan-Quinn information criterion.

4.3.3. Granger Causality Test

The results in Table 10 illustrate the Granger causality test between inflation (TXINF), cash circulation in the banking system (CFHBC), and the parallel exchange rate (TXPARA). The test shows that CFHBC Granger-causes TXINF at the 5% significance level ($p = 0.0157$), while the reverse is not true, indicating a unidirectional causality from CFHBC to inflation. TXPARA and TXINF exhibit bidirectional Granger causality, as both directions are highly significant ($p < 0.01$), suggesting a strong interdependence between inflation and the parallel exchange rate. However, no Granger causality is detected between TXPARA and CFHBC in either direction, as both p-values are far above conventional thresholds ($p > 0.8$).

Table 10. Granger causality test results between inflation, cash circulation, and the parallel exchange rate.

Lags: 4			
Null hypothesis:	**Obs.**	**F-Statistic**	**Prob.**
CFHBC does not granger cause TXINF	36	3.708	0.0157
TXINF does not granger cause CFHBC		0.554	0.697
TXPARA does not Granger cause TXINF.	37	46.285	6.000
TXINF does not granger cause TXPARA		152.156	1.000
TXPARA does not Granger cause CFHBC.	36	0.082	0.987
CFHBC does not granger cause TXPARA		0.373	0.825

4.3.3.1. Causal Links Between the Variables

Figure 2 highlights the causal relationship between the variables. According to the Granger causality test, a variable Y is said to cause another variable X if the probability associated with the causal relationship is below the critical threshold of 5%. When this condition is met in both directions between two variables, there is a feedback loop of causality, indicating a dynamic interdependence. For example, such a relationship could be observed between the parallel exchange rate (TXPARA) and the currency in circulation outside the banking system

(CFHBC), where each variable influences the other over time. For the purposes of this analysis, CFHBC causes TXINF in the sense of Granger, TXPARA causes TXINF in the sense of Granger, and TXINF causes TXPARA in the sense of Granger. In all three cases, the probability associated with causation is less than 5%. This formalization can be read schematically.

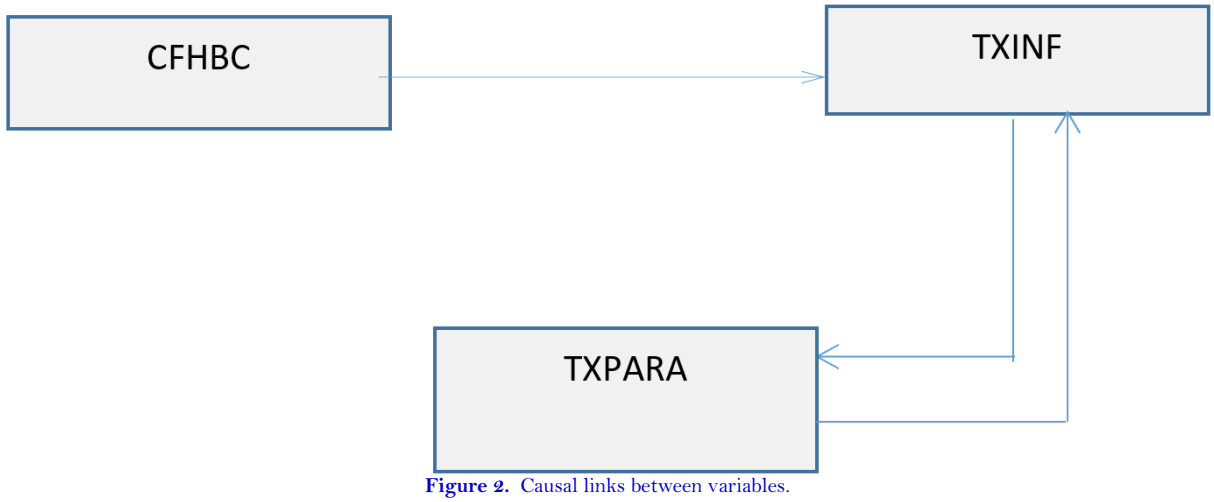

Figure 2. Causal links between variables.

4.3.4. Model Estimation

Table 11 presents the results of an estimated Vector Autoregression (VAR) model for three variables: the inflation rate (TXINF), the parallel exchange rate (TXPARA), and the currency in circulation outside the banking system (CFHBC), over the period 1984-2019 with 36 adjusted observations.

- The coefficients of the lagged variables indicate how past values influence current values. For example, TXINF (-3) has a positive and significant effect on TXINF.
- The variable CFHBC is included as an explanatory variable, but its coefficients on TXINF and TXPARA are very low and statistically insignificant, suggesting it has little or no direct effect in this model.
- The negative and significant coefficients of lagged TXPARA on TXINF indicate that past parallel exchange rates have a negative impact on current inflation.
- The R-squared of 0.68 for TXINF indicates that 68% of the variation in inflation is explained by the model, while the R-squared of 1 for TXPARA reflects a near-perfect explanation, suggesting strong autocorrelation.
- The information criteria (AIC, SC) and the log-likelihood help assess the overall quality of the model.

Table 11. Vector autoregression (VAR) model estimation results for the inflation rate (TXINF) and the parallel exchange rate (TXPARA).

Vector Autoregression Estimates **Standard errors in () & t-statistics in [ ]**	**TXINF**	**TXPARA**
TXINF(-3)	1.949	3.690
	-0.287	-7.900
	[6.778]	[0.005]
TXINF(-4)	-0.189	4.070
	-0.120	-3.300
	[-1.570]	[0.001]
TXPARA(-3)	-0.001	-2.430
	-0.000	-1.200
	[-3.184]	[-0.019]
TXPARA(-4)	-0.006	-1.110
	-0.000	-2.600
	[-6.223]	[-0.004]

Vector Autoregression Estimates Standard errors in () & t-statistics in []	TXINF	TXPARA
C	109.461	-3.970
	-228.233	-6.300
	[0.479]	[-0.006]
CFHBC	2.100	1.120
	-7.300	-2.000
	[0.288]	[0.005]
TXPARA	0.001	1
	-0.000	-1.300
	[2.853]	[7.600]
R-squared	0.678	1
Adj. R-squared	0.611	1
Sum of squared residuals	40114935	3.040
S.E. equation	1176.127	3.240
F-statistic	10.179	1.560
Log likelihood	-301.709	739.423
Akaike AIC	17.151	-40.690
Schwarz SC	17.458	-40.382
Mean dependent	676.741	110198.100
S.D. dependent	1886.816	529923.900
Determinant resid covariance (dof adj.)	1.450	
Determinant residual covariance	9.420	
Log likelihood	437.714	
Akaike information criterion	-23.539	
Schwarz criterion	-22.923	
Number of coefficients	**14**	

Hence, the estimated VAR model:

VAR Model:

==========

TXINF = C(1,1)*TXINF(-3) + C(1,2)*TXINF(-4) + C(1,3)*TXPARA(-3) + C(1,4)*TXPARA(-4) + C(1,5) + C(1,6)*CFHBC + C(1,7)*TXPARA

TXPARA = C(2,1) *TXINF(-3) + C(2,2)*TXINF(-4) + C(2,3)*TXPARA(-3) + C(2,4)*TXPARA(-4) + C(2,5) + C(2,6)*CFHBC + C(2,7)*TXPARA

VAR Model - Substituted Coefficients:

==========

TXINF = 1.94979813266*TXINF (-3) - 0.189364826008*TXINF (-4) -0.00143967251196*TXPARA(-3) - 0.00582057540451*TXPARA(-4) + 109.461807437 + 2.10493720937e-08*CFHBC + 0.00136527489326*TXPARA

TXPARA = 3.68512581279e-16*TXINF (-3) + 4.07335060593e-17*TXINF (-4) -2.42559314103e-18*TXPARA (-3) - 1.1077444778e-18*TXPARA (-4) - 3.96644120318e-13 + 1.11579296442e-22*CFHBC + 1*TXPARA

According to the results of this model, the parallel exchange rate, the quantity of money outside the banking circuit, and the past inflation variables explain the inflation rate at 67%, i.e., 0.678057. The parallel exchange rate is the most significant variable in the inflation rate model, since its Student's t-test is greater than 2, i.e., 2.85281, followed by the non-bank fiduciary circulation, which explains it at 0.2886. In addition, the relationship between the inflation rate, the parallel exchange rate, and the non-banking cash circulation is positive. Therefore, increasing the parallel exchange rate by 1% leads to an increase in the inflation rate by 100%. Similarly, a 1% increase in CFHBC increases the TXINF by 111.5%. Overall, these two variables explain 67% of the variability of the inflation rate.

4.3.5. Diagnosis of the Model

A) Residue Testing

1) The correlogram

Figure 3 highlights the correlogram of the residuals. Based on the results shown in this graph, the residuals appear to follow a white noise process. Indeed, all the residual autocorrelations fall within the confidence intervals, indicating no significant autocorrelation. This suggests that the model is well specified and effectively captures the data dynamics without leaving any unexplained structure in the errors.

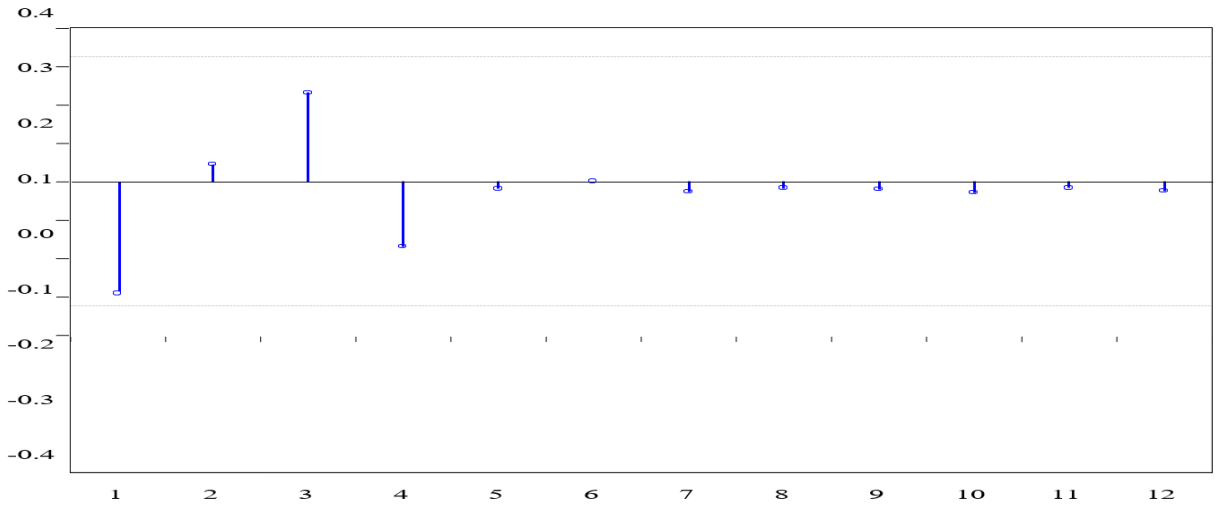

Figure 3. Correlogram.

Note: Autocorrelations with Approximate 2 Std. Err. Bounds Cor (TXINF, TXINF(-i))

2) The Lagrange Multiplier autocorrelation test

Table 12 presents the results of the Lagrange Multiplier (LM) test for residual serial correlation in the VAR model, showing significant autocorrelation at lag 1 as well as for the cumulative lags from 1 to 4. This indicates that the residuals are not independent over time and suggests that the model may require adjustment, such as increasing the number of lags or revising its specification.

Table 12. Lagrange Multiplier Test for Residual Serial Correlation in VAR Model.

Null hypothesis: No serial correlation at lag h						
Lag	**LRE* stat**	**Df**	**Prob.**	**Rao F-stat**	**Df**	**Prob.**
1	43.845	1	0	96.722	(1, 32.000)	0.000
2	0.382	1	0.536	0.391	(1, 32.000)	0.536
3	1.862	1	0.172	1.948	(1, 32.000)	0.172
4	1.031	1	0.309	1.065	(1, 32.000)	0.309
Null hypothesis: No serial correlation at lags 1 to h						
Lag	LRE* stat	Df	Prob.	Rao F-stat	Df	Prob.
1	43.845	1	0.000	96.722	(1, 32.000)	0.000
2	54.850	2	0.000	NA	(2, NA)	NA
3	53.973	3	0.000	48.686	(3, 30.000)	0.000
4	53.225	4	0.000	35.491	(4, 29.000)	0.000
*Edgeworth expansion corrected likelihood ratio statistic.						

B) Testing the stability of the model

Table 13 highlights the stability test of the model. According to the results, all the model's coefficients, particularly those of the explanatory variables TXPARA and CFHBC, are stable over time, as the roots of the characteristic polynomial lie inside the unit circle. Therefore, the VAR model satisfies the stability condition.

Table 13. VAR stability test based on characteristic polynomial roots.

Variable endogenous: TXINF	
Variable exogenous: C TXPARA CFHBC	
Lag specification: 1 2	
Root	Modulus
0.502	0.502
-0.137	0.137
Conclusion: No root lies outside the unit circle.	
VAR satisfies the stability condition.	

Figure 4 illustrates the model stability test. As shown in the graph, all the roots of the characteristic polynomial lie within the unit circle, indicating that the model's coefficients, especially those of the explanatory variables TXPARA and CFHBC, are stable over time. Therefore, the VAR model satisfies the stability condition.

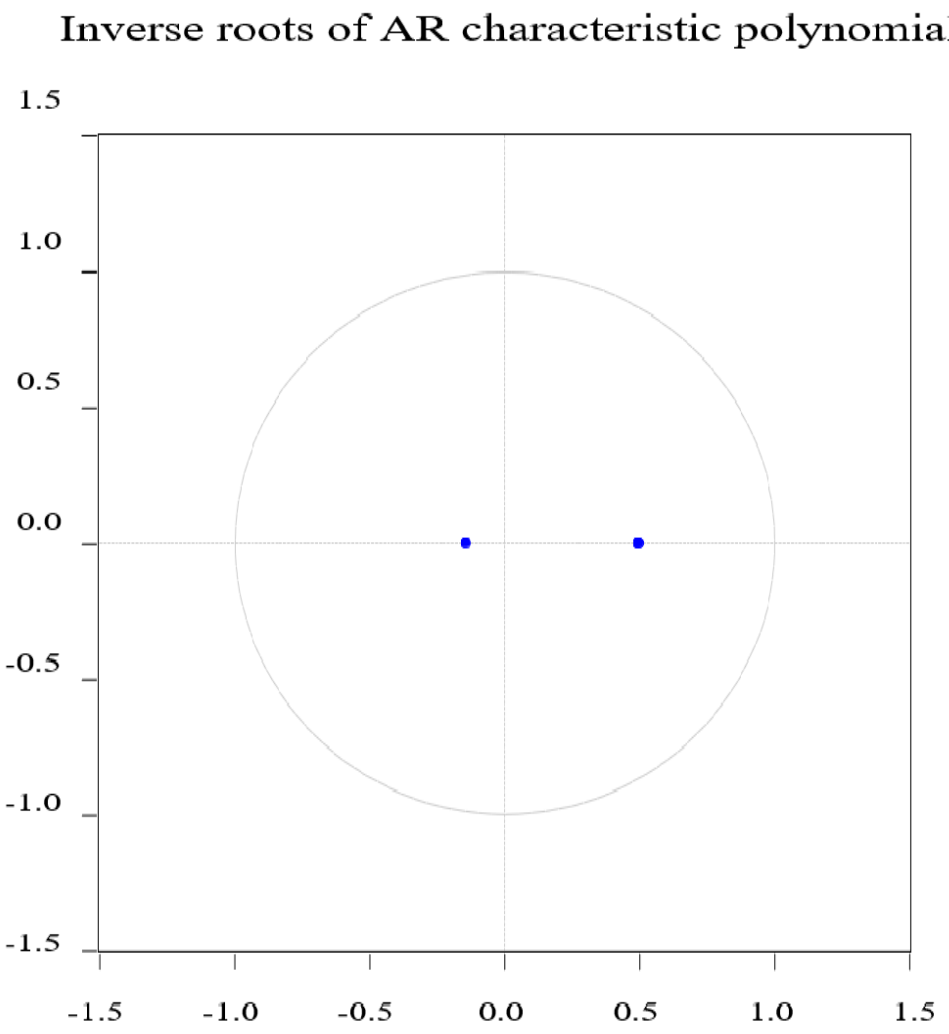

Figure 4. Model stability testing.

4.3.6. Dynamics of the VAR model

The values presented in Table 14, illustrating the evolution of the inflation rate, suggest that with appropriate monetary measures, the inflation rate could tend to decrease over time.

Table 14. Forecast error variance decomposition over time (Cholesky ordering: TXINF).

Period	Variance explained
1	1614.074
2	588.747
3	326.620
4	159.942
5	80.978
6	40.622
7	20.430
8	10.267
9	5.161
10	2.594

This is illustrated by the curve in Figure 5, which represents the evolution of the inflation rate over 10 years, assuming control over the two variables on which it depends.

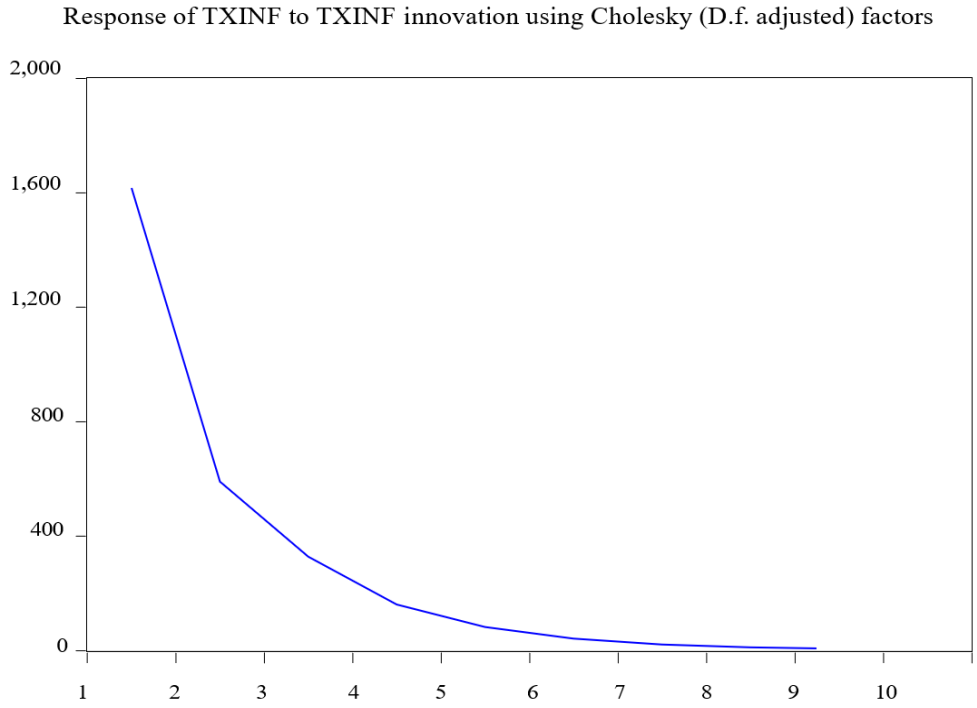

Figure 5. Dynamics of the VAR model.

5. DISCUSSION OF THE RESULTS PACKAGE

5.1. Socio-Demographic Factors and the Practice of Street Currency Exchange in Kinshasa

The results of the independence test (Table 3) indicate that gender does not have a significant impact on the likelihood of engaging in currency trading. Despite this lack of significance, the differences observed in the test table suggest that men are more prevalent in forex trading than women. This is because foreign exchange activities are associated with high risks and market pressure. These findings corroborate those of Tom De Herdt and Stefaan Marysse, in *The Reinvention of the Market from the Bottom*, where they note that Kinshasa's foreign exchange traders are predominantly men, often young people, who, in the context of job search, 71% practice this activity.

The level of education is not significantly related to street forex trading, even though 69% of forex traders are educated. This observation was revealed during our focus groups where the respondents stated that, in the field, street forex trading is in most cases characterized by strange aspects that are not necessarily impacted by the level of education: availability of financial resources, economic opportunities, social networks, which increasingly

influence the decision to practice this activity. As a result, even illiterate people or individuals with a low level of education practice this activity. In addition, the results also suggest that foreign exchange is a main activity for 81% of these respondents, 72% of whom have been practicing it for more than ten years, and most of them are married people. These results are similar to those of NYAHOHO Emmanuel, in his analysis on International Finance: Theory, Policy and Practice, where he points out that most people make forex trading their main activity and make speculation on foreign exchange an opportunity to promote their livelihood (Nyahoho, 2002).

5.2. Activity Factors Influencing Street Exchange Rates: Results from the Logit Model

The results of the Logit model highlight the influence of activity factors on the dynamics of street forex trading (Table 1). The results suggest that the resolution of family and social problems shows a negative sign and is not significant. This aspect is justified by the fact that the stability of a family or a household constitutes a broad and complex dynamic, so the benefits of foreign exchange seem low to ensure it in an integral way. In other words, solving these family and social problems requires more stable opportunities, thus refraining from high-risk informal activities like currency exchange. These results contrast with those of Claudine TSHIMANGA MBUYI, in her analysis "When forex traders analyze forex trading," where she demonstrates that social factors, particularly unemployment, are the basis of forex trading in Kinshasa (Tshimanga, 1996).

The negative sign associated with the authorization to practice foreign exchange is explained by the deposit required to obtain the BCC's approval. This deposit, which depends on the category, is estimated at $2,500 for large currency dealers operating in the capital, $1,000 at the provincial level, and $150 for manual or physical currency dealers. According to interviews with respondents, this amount is difficult to pay, given that 59% (more than half) of respondents have a base capital of less than USD 1,000.00. As for the other factors positively related to street forex trading: unemployment, profitability, exchange rate fixing, satisfaction of the conditions of supervision, it is fundamental to note that they increase the probability of practicing forex trading. As far as unemployment is concerned, the lack of formal opportunities or the weakness in job creation on the part of the public authorities push people to join forex trading, which is one of the fastest, easily accessible ways to generate income, as Claudine TSHIMANGA points out in "When forex traders analyze forex trading".

In addition, the results also suggest that profitability motivates the practice of forex trading. In other words, forex trading is perceived as an income-generating investment. Despite the risks associated with it, forex trading offers individuals profits from speculation on the exchange rate. These results are similar to those of Karlin Michel, in his analysis of foreign exchange trading: technical and accounting aspects, where he concludes that foreign exchange is essentially made up of loans and borrowings, buying and selling foreign currency with the aim of making a profit (Karlin, 1984). When it comes to setting the exchange rate, 70% of respondents say that the rate in their ecosystem is determined by the rate set by the BCC; their speculations are fundamentally based on that rate. These results contrast with those of NYAHOHO Emmanuel, who believes that speculative trading in the foreign exchange market is a zero-sum game (Nyahoho, 2002) where one person's gain is another's loss. As a result, speculation does not generate wealth and does not lead to any multiplier effect.

5.3. Spillover Effects of Street Forex on Monetary Policy

The results of the VAR model highlight the overall impact of street currency exchange on monetary policy. As explained in Section II.1.2, the fight against inflation is the main objective of monetary policy. According to the results of the VAR model, the parallel exchange rate, the amount of money outside the banking circuit, and the past inflation variables explain the inflation rate at 67%, i.e., 0.678057. Moreover, the parallel exchange rate is the most significant variable in the model, since its student's t-test value is greater than 2, i.e., 2.85281, followed by the non-bank fiduciary circulation, which explains it at 0.2886. In addition, the relationship between the inflation rate, the parallel exchange rate, and the non-banking cash circulation is positive. Therefore, increasing the parallel exchange

rate by 1% leads to a 100% increase in the inflation rate. Similarly, a 1% increase in the CFHBC increases the inflation rate (TXINF) by 111.5%. Overall, these two variables explain 67% of the variability in the inflation rate. All of these results corroborate those of Claude SUMATA in his analysis on the DRC's Parallel Economy: Exchange Rate and Hyperinflation Dynamics in Congo, where he demonstrates that the parallel market is responsible for inflation (Sumata, 2001).

6. CONCLUSION

The issue of street currency exchange is a major challenge for the economies of developing countries, particularly those in sub-Saharan Africa. In the DRC, given the extent of this social reality, it is difficult to obtain an accurate estimate of the number of foreign exchange traders. This phenomenon, in most cases impacted by complex socio-economic factors, complicates efforts at monetary regulation through monetary policy.

This study highlighted the factors influencing street currency exchange and its repercussions on monetary policy. To do this, the statistical analysis was carried out in three sequential phases: the identification of differences observed in the sample via the Chi-square test (or χ^2 test), the identification of activity factors influencing street currency exchange in Kinshasa via logistic regression, as well as modeling its repercussions on monetary policy through the VAR model. The results on the influence of socio-demographic factors indicate that street currency exchange is more practiced by men, often young under 45 years of age. The results also suggest that even if the educated predominate in this activity, the level of education is not a fundamental condition for exercising this profession, given the ease of entry. It was also noted that foreign exchange is a main activity for 81% of these respondents, 72% of whom have been practicing it for more than ten years. As far as the factors of activity are concerned, it is crucial to note that street currency exchange is more influenced by unemployment, profitability, the fixing of the exchange rate, and satisfaction of the conditions of supervision. As a result, it has been shown that the absence of formal opportunities or job creation by the public authorities pushes people to engage in foreign exchange, which is a quick and easily accessible way to generate income. These individuals often turn forex trading into an investment, believing it to be profitable. Regarding the setting of the exchange rate, 70% of respondents state that the rate in their ecosystem is determined based on the rate set by the BCC, which they then use as a basis for their speculation. The results related to the repercussions of street currency exchange on monetary policy indicate that the parallel exchange rate, the quantity of money outside the banking circuit, and past inflation variables explain the inflation rate at 67%, i.e., 0.678057. In particular, the parallel exchange rate is the most significant variable in the model, with a student test value greater than 2, i.e., 2.85281, followed by non-bank fiduciary circulation, which explains it at 0.2886. In view of these results, some strategies are suggested in terms of recommendations to improve the street forex model:

- The results showed a negative impact of the central bank's authorization on individuals who want to practice foreign exchange. We recommend that public authorities professionalize this activity. To do this, it is crucial to review the conditions for obtaining the license, which make registration with the central bank less attractive. According to the information from our focus groups conducted at Sozacom, Victoire, UPN, the deposits required for this registration are not favorable to operators. Additionally, 59% of respondents have an initial capital of less than $1,000.00.
- The results also indicate a negative impact of the resolution of family and social problems through street currency exchange. Following the previous recommendation, in view of the proliferation of this activity, its professionalization should have positive repercussions on the general economy: the feeding of fiscal policy, the fight against inflation itself, etc.
- The results indicate a low level of integration of women in this activity. Following professionalization, it will be crucial to promote the gender approach in foreign exchange.

Funding: This study received no specific financial support.
Institutional Review Board Statement: The Ethical Committee of the Catholic University of Congo (UCC), Kinshasa has granted approval for this study (Ref. No. JMB/CE/UCC/07/25).
Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.
Competing Interests: The authors declare that they have no competing interests.
Authors' Contributions: Both authors contributed equally to the conception and design of the study. Both authors have read and agreed to the published version of the manuscript.

REFERENCES

De Herdt, T., & Marysse, S. (2002). The reinvention of the market from the bottom: Monetary circuits and trusted persons in the streets of Kinshasa. In G. De Villers & P. Monnier (Eds.), Kinshasa: Manière de vivre. In (pp. 35–70). Brussels/Paris: ASDOC/Le Harmattan

Drumetz, F., Pfister, C., & Sahuc, J.-G. (2015). *Monetary policy*. Louvain-la-Neuve, Belgium: De Boeck.

Eichengreen, B. (2011). *Exorbitant privilege: The rise and fall of the dollar and the future of the international monetary system*. New York: Oxford University Press.

FasterCapital. (2024). *Forex traders influence financial markets: A comprehensive analysis*. Dubai, UAE: FasterCapital.

Friedman, M. (1970). The counter-revolution in monetary theory (Occasional Paper No. 33). In (pp. 14). London: Institute of Economic Affairs

Galag, W. C. (2024). *Is cambism in the DRC legal or not? Team of Lawyers.cd*. Retrieved from https://avocats.cd/blog/le-cambisme-en-rdc-est-ce-legal-ou-pas

Graziani, A. (1991). The Keynesian theory of money and the financing of the economy. *Applied Economics*, *23*(1), 13–32.

Jahan, S., & Papageorgiou, C. (2014). *What is monetarism? IMF Finance & Development, March 2014*. Retrieved from https://www.imf.org/external/pubs/ft/fandd/fre/2014/03/pdf/basics.pdf

Kalumuna, J. (2004). *International trade law*. Kinshasa: CEPAS.

Karlin, M. (1984). *Currency exchange: Technical and accounting aspects, process of currency circulation* Lyon: Presses Universitaires.

Mabantula, M.-B. (2010). Currency exchange activities in the streets of Kinshasa: Gender dynamics and social embeddedness. Unpublished Doctoral Dissertation. The Graduate Institute of International Development Studies, Geneva.

MacKinnon, J. G. (1996). Numerical distribution functions for unit root and cointegration tests. *Journal of Applied Econometrics*, *11*(6), 601–618.

Mishkin, F. S. (1996). The channels of monetary transmission: Lessons for monetary policy. *Bulletin De la Banque De France*(27), 1–15.

Mulumba, M. (2001). *Money in the Congolese economy*. Kinshasa: CERDI.

Muzaliwa, M. (2022). *Currency exchange: Regulation and practice in the Democratic Republic of Congo*. Retrieved from https://fr.scribd.com/document/622468172/CHANGE-REGLEMENTATION-ET-PRATIQUE-EN-RD-CONGO-Par-MUZALIWA-KALINDE-Martin

Nyahoho, E. (2002). *International finance: Theory, policy and practice* (2nd ed.). Québec, Canada: Presses de l'Université du Québec.

Ponsard, C. (1959). The quantitative theory of money. *Annales. Économies, Sociétés, Civilisations*, *14*(1), 121–140.

Sumata, C. (2001). *The parallel economy of the DRC: Exchange rates and the dynamics of hyperinflation in Congo*. Paris: L'Harmattan.

Tshimanga, C. (1996). When the foreign exchange trader analyzes foreign exchange: Manual of economic analyses. Economic Notes, No. 25. In (pp. 16). Kinshasa: National Institute of Statistics